# CAR-1001 Series
# Communication Appliance

## User's Manual

Revision: 1.0

# CE

**This certificate of conformity of CAR-1001 series with actual required safety standards in accordance with 89/366 ECC-EMC Directive and LVD 73/23 ECC**

# UL

**This product meets all safety requirements per UL60950 standard.**

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TÜV CERT ISO 9001

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# Chapter 1 Introduction

## 1.1 About This Manual

This manual contains all required information for setting up and using the CAR-1001 series.

CAR-1001 provides the essential platform for delivering optimal performance and functionality in the entry communications appliance market segment. This manual should familiarize you with CAR-1001 operations and functions.CAR-1001 series provide up to 4 on-board Ethernet ports to serve communication applications like Firewall, requiring 4 Ethernet ports to connect external network (internet), demilitarized zone and internal network.

CAR-1001 series overview:

- ✧ INTEL ATOM D525 1.8GHz
- ✧ Memory: Two DDR3 SO-DIMM slot and up to 8G
- ✧ Four Gigabit Ethernet interfaces
- ✧ Independent management console(RS232)
- ✧ One PCI-E x8 Golden finger GF reserved for proprietary daughter card in R/M
- ✧ One 3.5” SATA Hard disk

## 1.2 Manual Organization

This manual describes how to configure your CAR-1001 system to meet various operating requirements. It is divided into three chapters, with each chapter addressing the basic concept and operation of this system.

Chapter 1: Introduction. This section describes how this document is organized. It includes brief guidelines and overview to help find necessary information.

Chapter 2: Hardware Configuration Setting and Installation. This chapter demonstrated the hardware assembly procedure, including detailed information. It shows the definitions and locations of Jumpers and Connectors that can be used to configure the system.

Chapter 3: Operation Information. This section provides illustrations and information on the system architecture and how to optimize its performance.

Any updates to this manual, would be posted on the web site:

http://www.cas-well.com/products/index.php

## 1.3 Technical Support Information

Users may find helpful tips or related information on Caswell's web site: http://www.cas-well.com A direct contact to Caswell's technical person is also available. For further support, users may also contact Caswell’s headquarter in Taipei or local distributors.

**Taipei Office Phone Number:** +886-2-7705-8888

## 1.4 Board Layout

**Figure 1-1 Board Layout of CAR-1001 M/B**

## 1.5 System Block Diagram

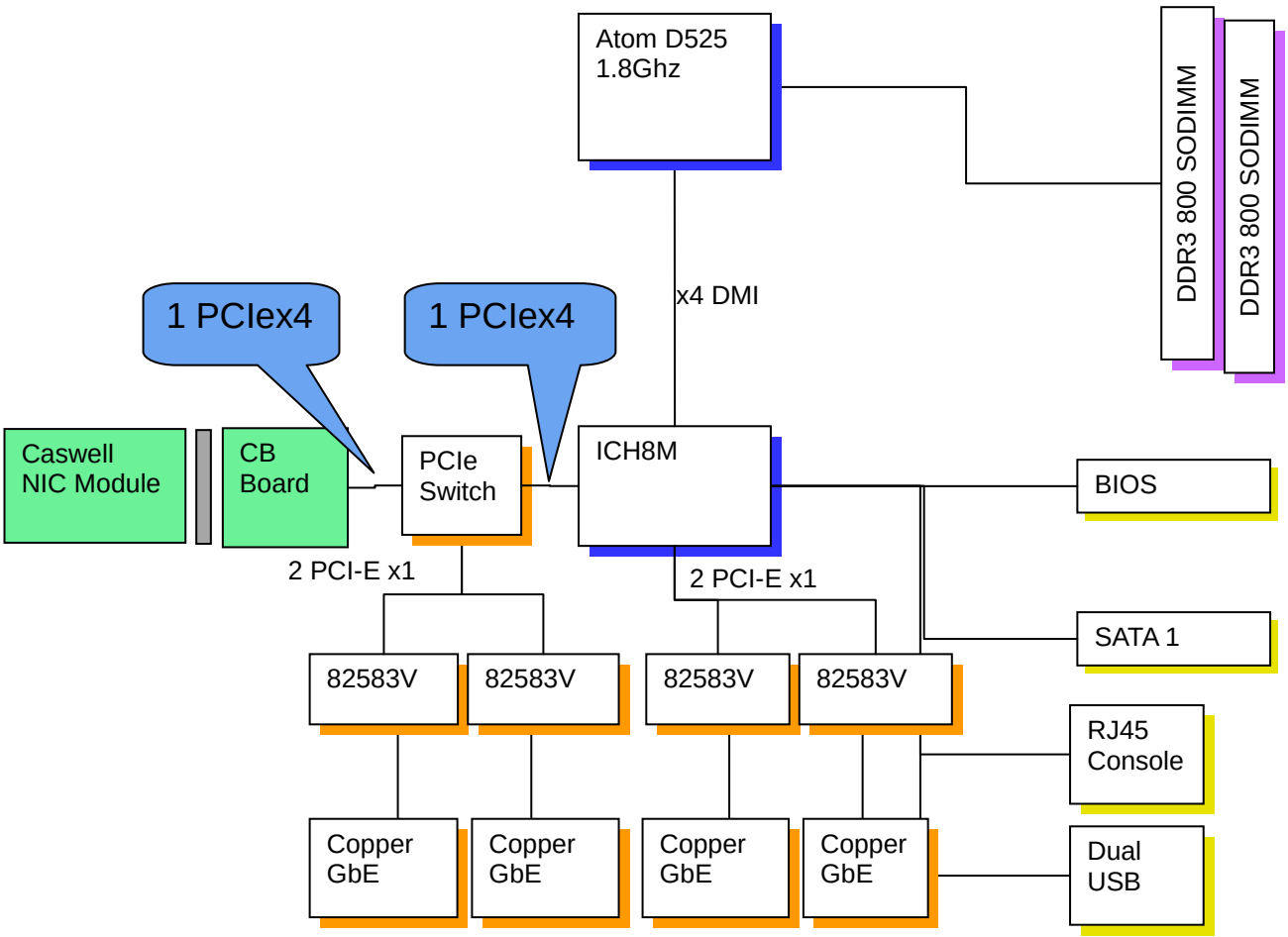



**Figure 1-2 CAR-1001 Basic Block Diagram**

## 1.6 Product Specification

| # | Feature | Detailed Description |
|---|---|---|
| 1 | CPU | • Onboard ATOM D525 1.8GHz processor |
| 2 | CPU Board | • CAPB-1001VR with Intel ATOM D525+ ICH8M<br>• Board dimension: 248x193mm |
| 3 | System Memory | • 2 SO-DIMM socket<br>• Support DDR3 800.<br>• up to 8GB |
| 4 | Ethernet | • 4 copper GbE LAN port start in left and base on Intel(R) 82583V<br>• P0 and P1 connect to SB by PCI-E switch, PEX 8616<br>• PXE in P3 |
| 5 | Storage Device | • 1 x SATA II 3.5” Hard disk |
| 6 | Graphics | • VGA Pin-header on board |
| 7 | Expansion | • One PCI-E X8 golden finger with PCI-E x4 signal (connect SB by PCI-E switch).<br>• Two internal USB pin-header on board |
| 8 | PSU | • Full range ATX PSU with total 100W power output will be required.<br>• Certification: CE, UL, 3C<br>• Dimension: 150 x 81.5 x 40.5 mm |
| 9 | Front Panel | • 4 RJ-45 connector for PCI-E (x1) GbE interfaces<br>• On/off Button<br>• Hardware Reset Button<br>• F/D Button<br>• System LED: Power, Data access.<br>• Ethernet LED: For every Ethernet interface there should be LEDs for link status and speed of LAN-ports. |
| 10 | Rear Panel | • AC power inlet<br>• On/Off switch<br>• Fan opening for system ventilation |
| 11 | Golden finger | • One PCI-E x8 GF reserved for proprietary daughter card in R/M |
| 12 | Dimension | ◆ W:438mm/17.2” x D:319mm /12.6” x H: 44mm /1.73” (1U) |

| # | Feature | Detailed Description |
|---|---|---|

| | Operating | Storage |
|---|---|---|
| Acoustics | < 55dB | -- |
| Temperature | 5°C to 40°C | -20°C to 70°C |
| Relative Humidity | 10 to 90% RH | 5 to 95% RH |
| Shock | 0.5 Sine shock, 10G peak, 10 +/- 3 ms on (X,Y,Z) axis | |
| Vibration | 0.5G (Peak) / 5~500 Hz, 2hours at each f Z axis | (Packaged) Sine Wave,2.0G / 500 Hz, 2hours at each axis(X,Y,Z) |
| Transportation | | (Packaged) 0.5 sine shock, 50G peak on each surface. |
| Drop | | (Packaged) H= 1.2M |
| Random Vibration | | (Packaged Sine Wave,2.8G / 5~500 Hz, 1hours at each axis(X,Y,Z |

13 Environmental requirements

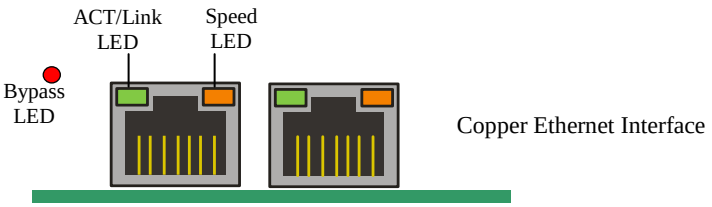
## 1.7 LED Signaling Standard

### 1. Power and Data-access LED

| Lettering | Symbol | Function | Color | Signaling |
|---|---|---|---|---|
| PWR | | Power status | Green | Off – No power, system off.<br>On – Power good, system on. |
| Data Access | | Data Access | Red | Off – no data access through IDE or SATA channel<br>On – data is in transition through IDE or SATA channel |

### 2. Ethernet LED

| Label | Color | *Indication* | Status |
|---|---|---|---|
| **ACT/LINK** | **Green Or Others** | ***On*** | 1. The Ethernet port is receiving power.<br>2. Good linkage between the Ethernet port and its supporting hub. |
| | | **Off** | 1. The adapter and switch are not receiving power.<br>2. No connection between both ends of network cable.<br>3. The drivers of Ethernet have not been loaded or does not function correctly. |
| | **Green Or Others** | **Flashing** | The adapter is sending or receiving network data. The frequency of the flashes varies with the amount of network traffic. |
| **SPEED** | **Yellow** | **On** | ACT/LNK LED must on then this LED show the operating at 1000 Mbps. If ACT/LINK is off and this function will be disable. |
| | **Green** | **On** | ACT/LNK LED must on then this LED show the operating at 100 Mbps. If ACT/LINK is off and this function will be disable. |
| | | **Off** | ACT/LNK LED must on then this LED show the operating at 10 Mbps. If ACT/LINK is off and this function will be disable. |



# Chapter 2 Getting Started

This section describes how the hardware installation and system settings should be done.

## 2.1 Included Hardware

The following hardware is included in package:

- CAR-1001 Communication Appliance System Board
- One null serial port cable

Note: "Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E) Reliable Earthling - Reliable earthlings of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."

## 2.2 Before You Begin

To prevent damage to any system board, it is important to handle it with care. The following measures are generally sufficient to protect your equipment from static electricity discharge:

When handling the board, use a grounded wrist strap designed for static discharge elimination and touches a grounded metal object before removing the board from the antistatic bag. Handle the board by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.

When handling processor chips or memory modules, avoid touching their pins or gold edge fingers. Restore the communications appliance system board and peripherals back into the antistatic bag when they are not in use or not installed in the chassis.

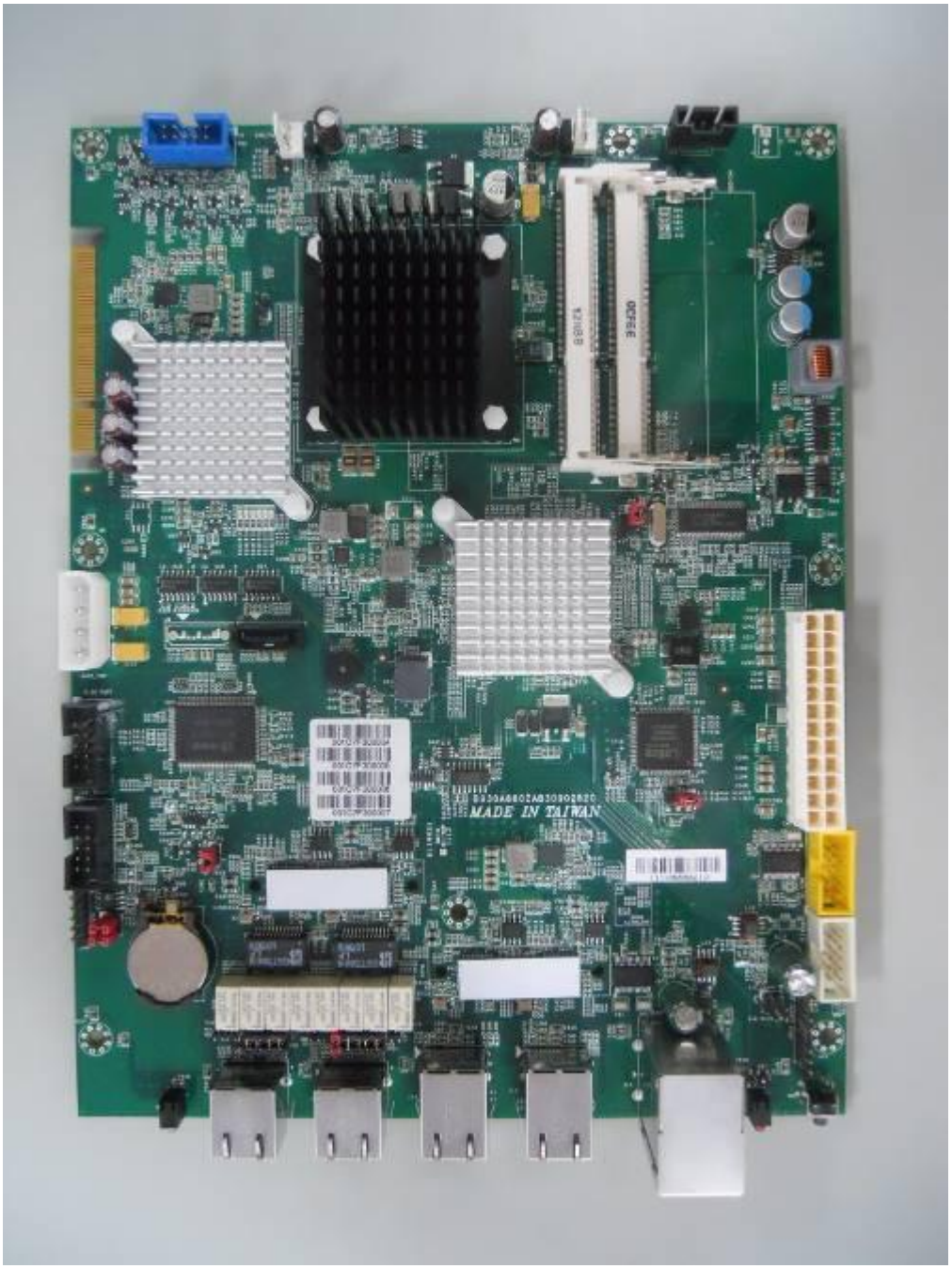
Some circuitry on the system board can continue operating even though the power is switched off. Under no circumstances should the Lithium battery cell used to power the real-time clock be allowed to be shorted. The battery cell may heat up under these conditions and present a burn hazard.

**WARNING!**

1. **"CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS"**
2. **This guide is for technically qualified personnel who have experience installing and configuring system boards. Disconnect the system board power supply from its power source before you connect/disconnect cables or install/remove any system board components. Failure to do this can result in personnel injury or equipment damage.**
3. **Avoid short-circuiting the lithium battery; this can cause it to superheat and cause burns if touched.**
4. **Do not operate the processor without a thermal solution. Damage to the processor can occur in seconds.**
5. **Do not block air vents. Minimum 1/2-inch clearance required.**

## 2.3 Hardware Configuration Setting

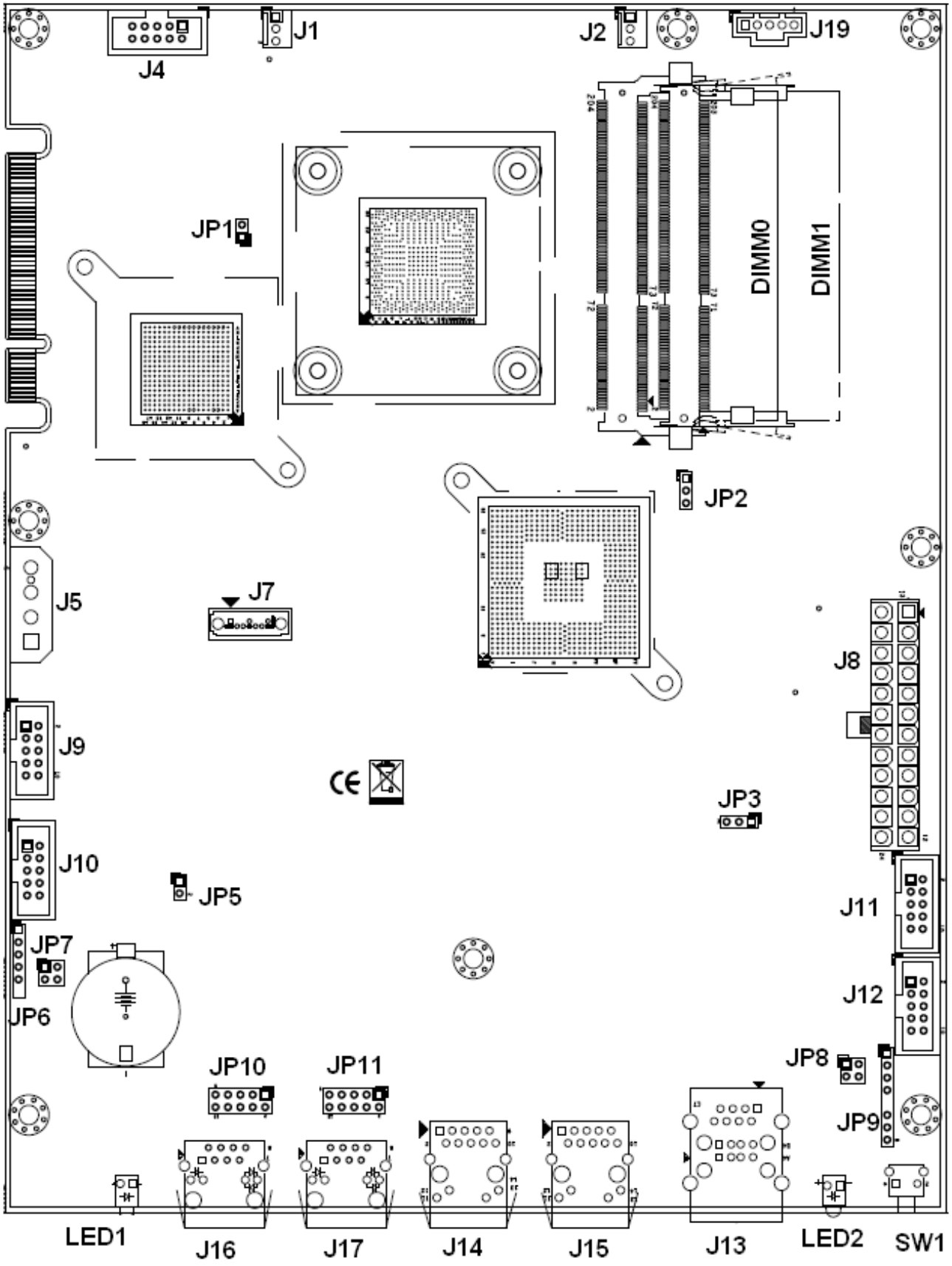
### 2.3.1 CAR-1001 System




### 2.3.2 CAR-1001 System Board Jumper

In general, jumpers on CAR-1001 system board are used to select options for certain features. Some of the jumpers are configurable for system enhancement. The others are for testing purpose only and should not be altered. To select any option, cover the jumper cap over (Short) or remove (NC) it from the jumper pins according to the following instructions. Here NC stands for “Not Connected”.

## Location of Jumpers



**On-board LED:**

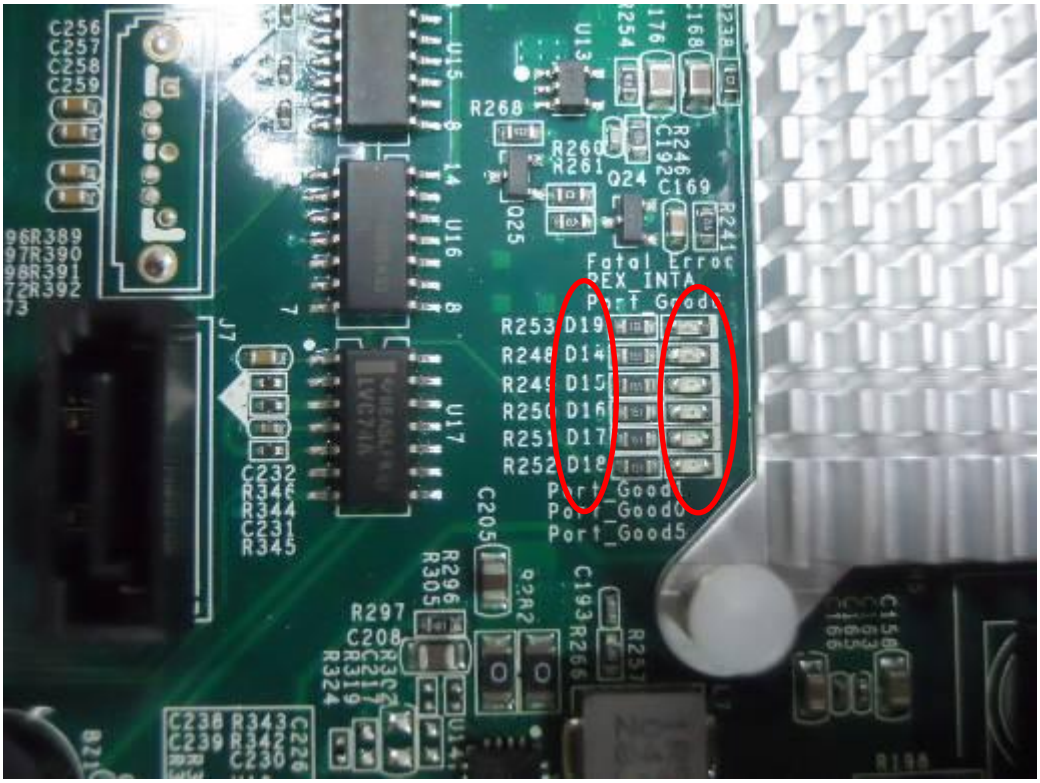
D15、D16、D17、D18: Definition by PEX 8616

| State | LED Pattern |
|---|---|
| Link is down | OFF |
| Link is up in Gen2，all Lanes are up | ON |
| Link is up in Gen2，reduced Lanes are up | Blinking，0.5s ON，0.5s OFF |
| Link is up in Gen1，all Lanes are up | Blinking，1.5s ON，0.5s OFF |
| Link is up in Gen1，reduced Lanes are up | Blinking，0.5s ON，1.5s OFF |

D19：PEX 8616 Fatal Error LED

D14：PEX 8616 Interrupt Output

- External I2C I/O Expander Input event
- PCI Express Hot Plug events
- General-Purpose Input Interrupt event
- Device-Specific Error conditions
- NT Virtual Doorbell event
- NT Port Link Interface conditions




**JP1：NMI**

| Button | Function | Remark |
|---|---|---|
| JP1 | NMI Button | Click to generate an NMI |

**JP2：CMOS Clear**

| JP2 | Function |
|---|---|
| 1-2 Short | Normal Operation * |
| 2-3 Short | Clear CMOS Contents |

| Connector | Function | Remark |
|---|---|---|
| J4 | VGA connector | |
| J1 | Smart FAN connector | |
| J2 | Smart FAN connector | |
| J19 | Bypass testing port | |

| | | |
|---|---|---|
| DIMM0 | SO-DIMM DDR3 800 SLOT | |
| DIMM0 | SO-DIMM DDR3 800 SLOT | |
| J5 | 4-pin power for HDD | |
| J7 | SATA connector | |
| J8 | ATX power connector | |
| J9 | 80 port | |
| J10 | PS/2 port | |
| J11 | COM port for EZIO | |
| J12 | USB * 2 | |
| JP6 | Programming port for PIC | |
| JP9 | Programming port for CPLD | |
| J16 | Giga LAN port 1 | |
| J17 | Giga LAN port 2 | |
| J14 | Giga LAN port 3 | |
| J15 | Giga LAN port 4 | |
| J13 | Console + USB * 2 | |

**J4: VGA connector define**

| Pin | Signal Name | Pin | Signal Name |
|---|---|---|---|
| 1 | RED | 2 | DDCCLK |
| 3 | GREEN | 4 | Ground |
| 5 | BLUE | 6 | DDCDATA |
| 7 | HSYNC | 8 | Cable inserted detect |
| 9 | VSYNC | 10 | N/C |

**J5：+5V & +12V Power Connector (Only Output)**

| Pin | Signal Name |
|---|---|
| 1 | VDD_12V |
| 2 | GND |
| 3 | GND |
| 4 | VDD_5V |

**JP8**

| Button | Function | Remark |
|---|---|---|
| 1-2 | Power button | |
| 3-4 | Reset button | |

**SW1**

| Button | Function | Remark |
|---|---|---|
| SW1 | Reset to Default Button | |

**JP10 & JP11: Bypass setting**

| Jumper | Function |
|---|---|
| JP10 (1-2, 3-4, 5-6, 7-8 ) short JP11 (1-2, 3-4, 5-6, 7-8, 9-10) short | LAN port 1 and port 2 can be set as normal or bypass mode in BIOS * |
| All open | Bypass function no work. |

**JP5: WDT**

| Jumper | Function |
|---|---|
| 1-2 short | Normal Operation * |
| 1-2 open | Only for WDT test |

**JP7**

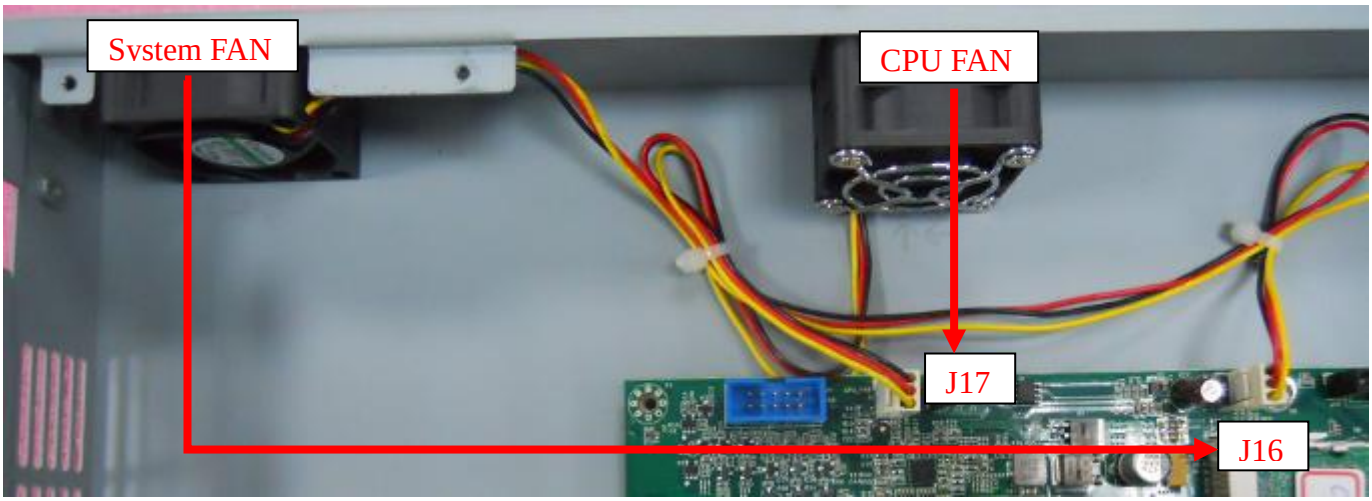
| Jumper | Function |
|---|---|
| 1-2 short | Normal Operation * |
| 3-4 short | Normal Operation * |
| 1-2 open | While programming PIC |
| 3-4 open | While programming PIC |

**J1: CPU FAN Connector Definition**

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | +12V |
| 3 | FAN SPEED IN |

**J2: System FAN Connector Definition**

| Pin | Signal Name |
|---|---|
| 1 | GND |
| 2 | +12V |
| 3 | FAN SPEED IN |



## 2.4 The Chassis

The system is integrated in a customized 1U chassis (***Fig. 2-1, Fig. 2-2***). On the front panel you will find a 7-push-button LCD module (EZIO), left LAN ports, two USB ports and a COM port.

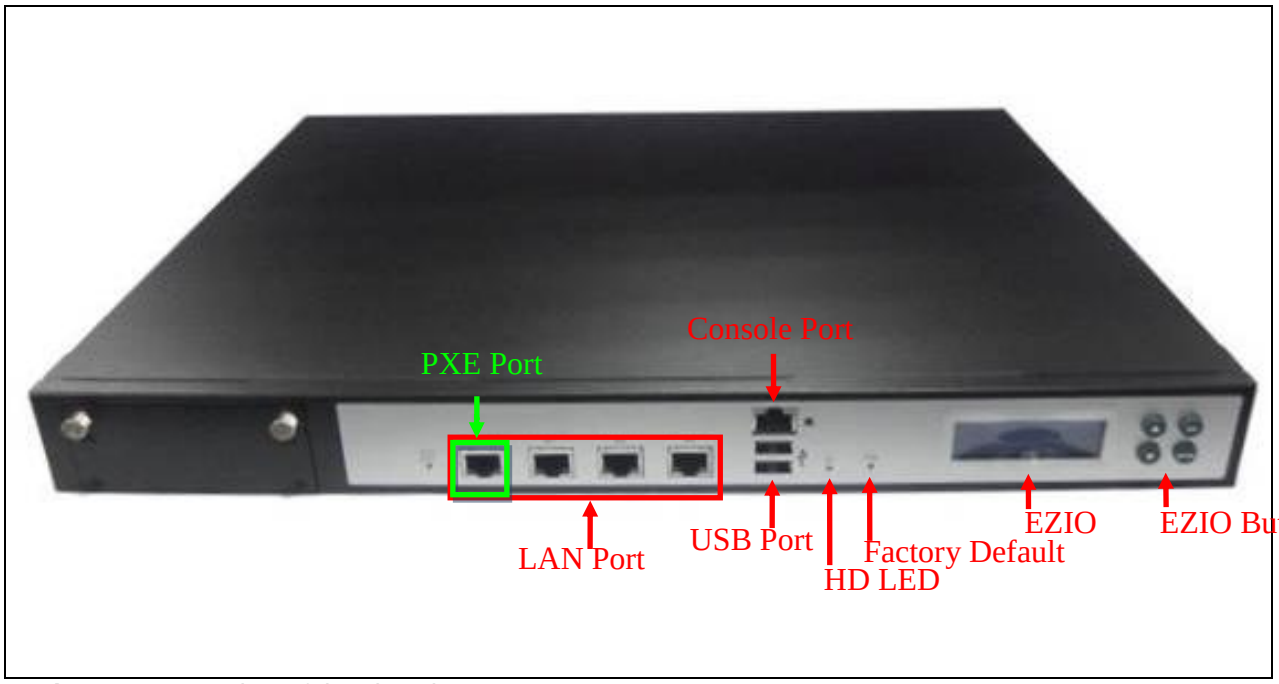



***Fig. 2-1*** *Front view of the chassis*

***Fig. 2-2*** *Rear view of the chassis*

## 2.5 Open the Chassis

1. Loosen the 2 screws of the chassis, the rest two on the back, to remove the top lead (***Fig. 2-3***).

***Fig. 2-3*** *Take off screws*

2. The top lead (***Fig. 2-4***) can be removed from the base stand (***Fig. 2-5***).

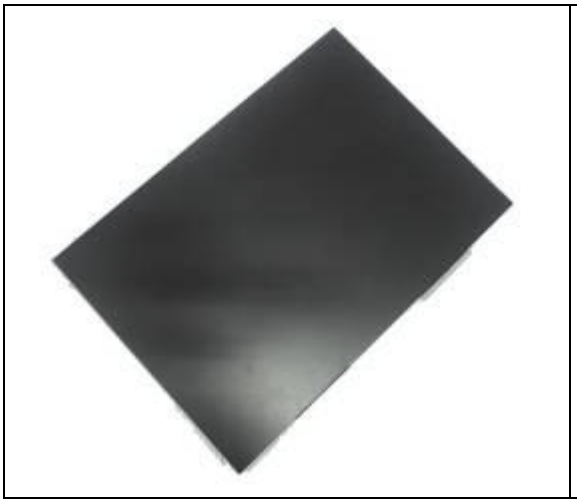


***Fig. 2-4*** *The top lead*

***Fig. 2-5*** *The base stand*

## 2.6 Remove and Install DIMM

**Follow these steps to upgrade RAM module:**

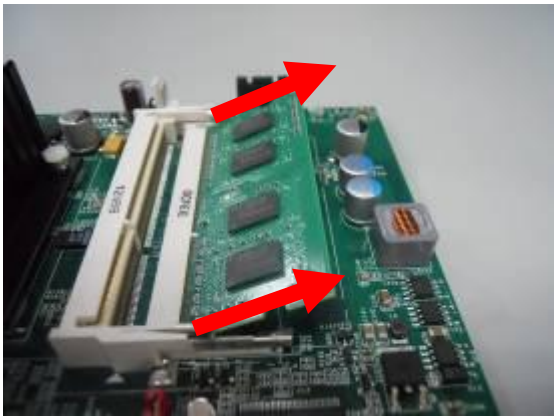
Make sure to unplug the power supply before adding or removing DIMMs or other system components. Failure to do so may cause severe damage to both the motherboard and the components.

1. Obliquity inserts the DIMM into the socket and depresses DIMM until the retaining clips back in place

A DDR DIMM is keyed with a notch so that it fits in only one direction. DO NOT force a DIMM into a socket to avoid damaging the DIMM.

**Follow these steps to remove a DIMM:**

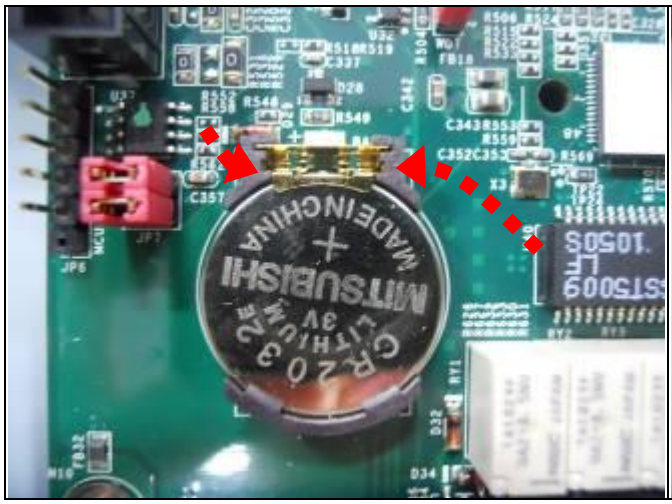
1. Pull the retaining clips of DIMM socket simultaneously to unlock the DIMM



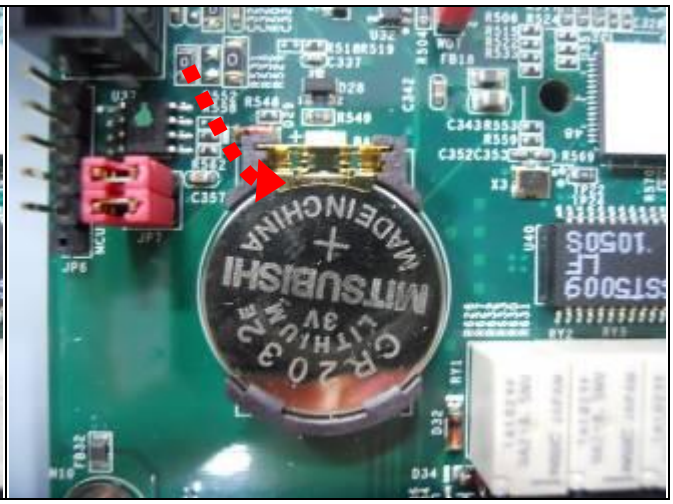
2. Remove the DIMM from the socket

## 2.7 Remove and Install Battery

1. Press the metal clip back to eject the button battery
2. Replace it with a new one by pressing the battery with fingertip to restore the battery




*Eject the battery*




*Restore the battery*

## 2.8 Install HDD

The system has an internal drive bay for one 3.5" SATA hard disk drive. If the HDD is not pre-installed, you can install it by yourself. Follow the steps below to install the HDD:

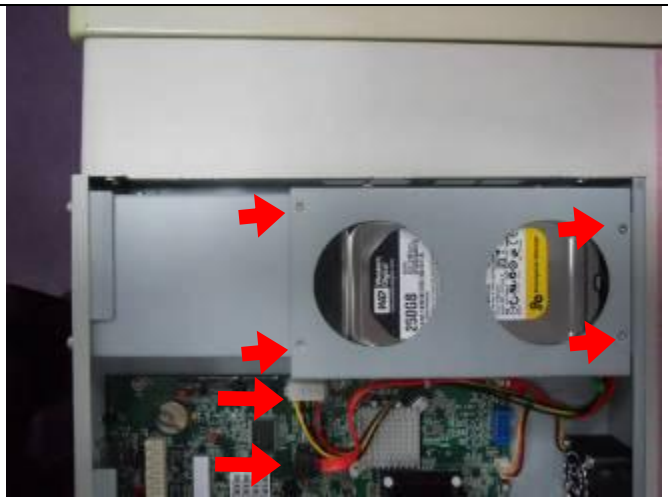
There are one hard disk kits in the CAR-1001 system:

Hard disk fixed plate and hard disk tray

1. No add any card, use 3.5” HDD kit:

3.5”HDD Kit

install HDD Kit

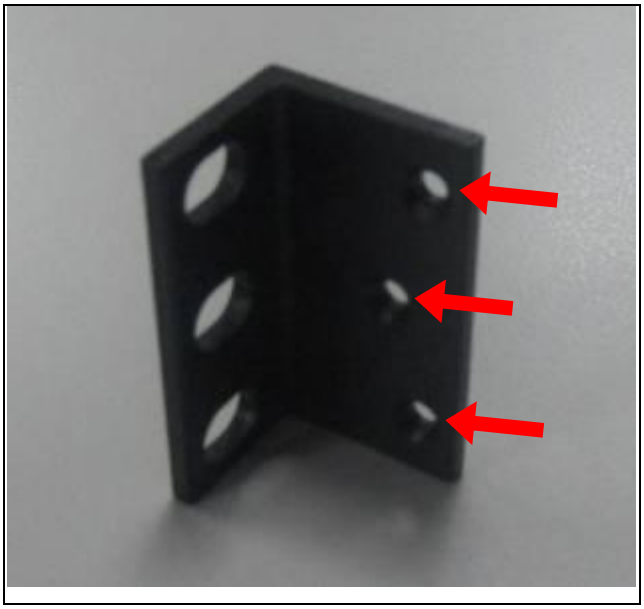


Fasten the two screws to lock Hard disk fixed plate and chassis, and connect Power cable and HDD cable to CAR-1001 system board

## 2.9 Ear Mount Kit Installation

The CAR-1001 series shipped with 2 ear mount kits. The following is the installation instruction of these ear mounts:

1. Take out the L shape ear mount kits. One ear mount fits on one side of the chassis,
2. Placing the side with four holes agonists the chassis and the side with two holes face outward.
3. Fasten three screws on each side

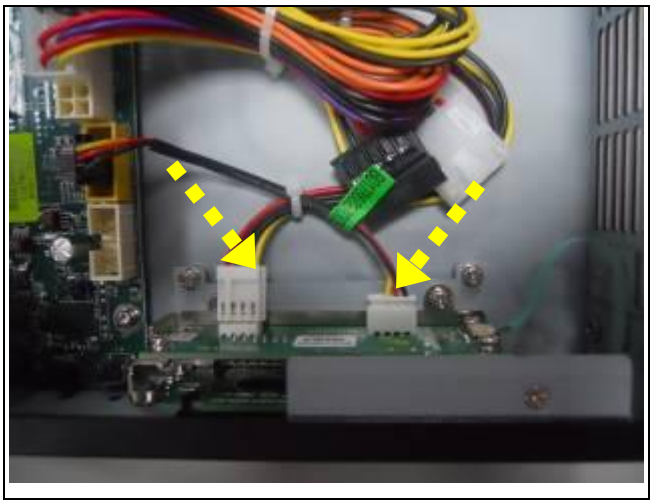


*Fasten the screws to the side*

## 2.10 Remove EZIO / LCD

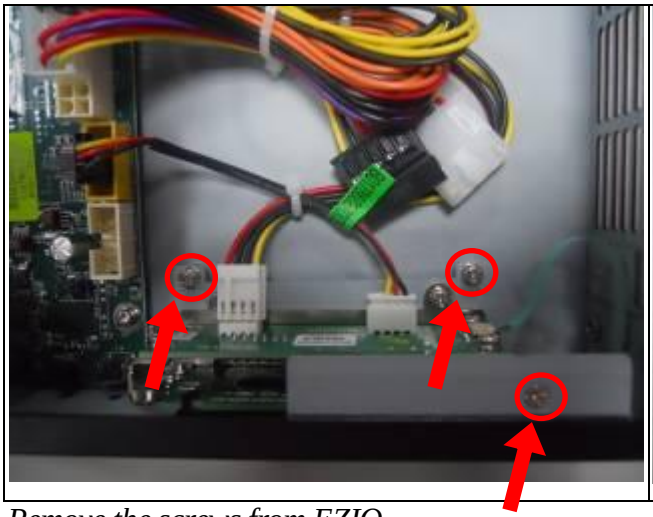
The CAR-1001 series support EZIO modules. The following is the remove instruction of these EZIO/LCD modules:

1. Remove all cables from EZIO



*Remove the cable from EZIO*

2. Remove the screws from chassis.



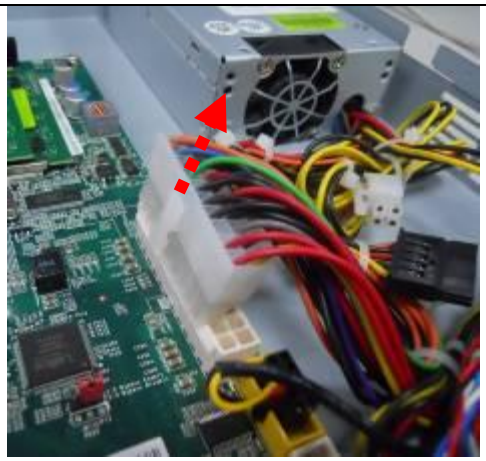
*Remove the screws from EZIO*

*EZIO*

## 2.11 Remove Power Supply

The following is the remove step instruction of power supply.

1. Remove all power cables from main board.
2. Remove the screws from PSU



*Remove all cables from board*

*Remove the screws from PSU*

*Remove the screws from PSU*

## 2.12 Remove main board

The following is the remove step instruction of main board.

1. Remove all cables from main board.
2. Remove all screws from main board.

*Remove all cables and screw from main board*

## 2.13 Use a Client Computer

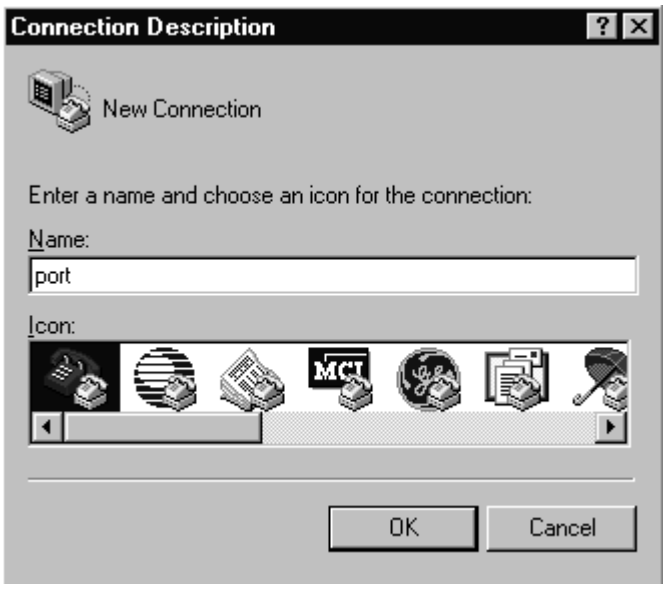
### *Connection Using Hyper Terminal*

To access CAR-1001 via the console, Hyper Terminal is one of many choices. Follow the steps below for the setup:

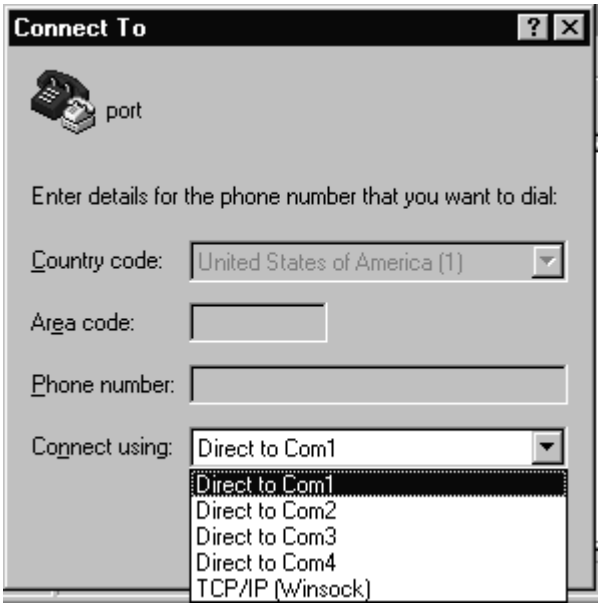
***Note**: Terminal software may need to update for correct console output.*

1. Execute HyperTerminal under C:\Program Files\Accessories\HyperTerminal

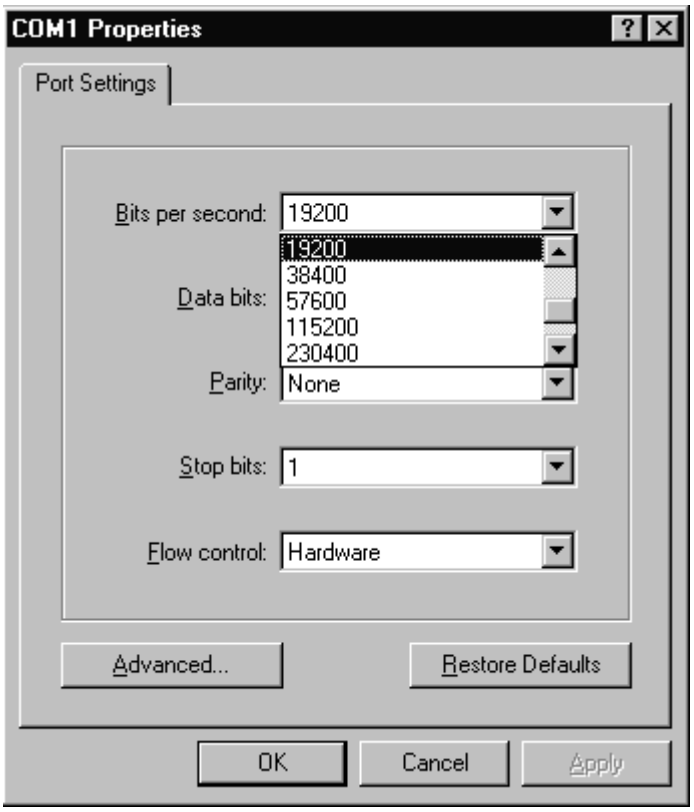
2. Enter a name to create new dial



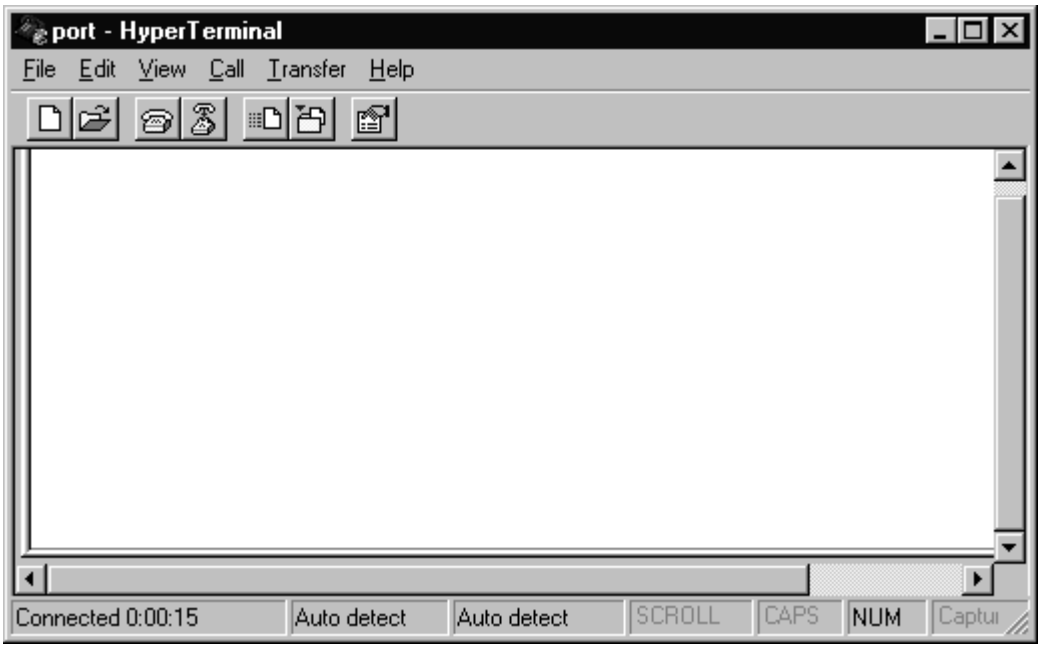

3. For the connection settings, make it Direct to Com1.



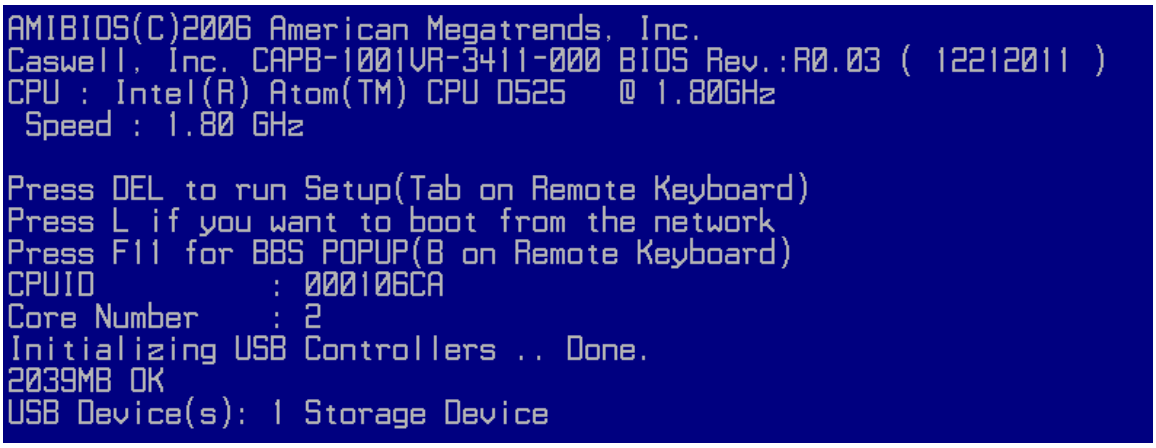
4. Please make the port settings to Baud rate 19200, Parity None, Data bits 8, Stop bits 1




5. Turn on the power of CAR-10011 system, after following screen was shown:



6. User can see the boot up information of CAR-1001


AMIBIOS(C)2006 American Megatrends, Inc.
Caswell, Inc. CAPB-1001VR-3411-000 BIOS Rev.:R0.03 ( 12212011 )
CPU : Intel(R) Atom(TM) CPU D525 @ 1.80GHz
Speed : 1.80 GHz
Press DEL to run Setup(Tab on Remote Keyboard)
Press L if you want to boot from the network
Press F11 for BBS POPUP(B on Remote Keyboard)
CPUID : 000106CA
Core Number : 2
Initializing USB Controllers .. Done.
2039MB OK
USB Device(s): 1 Storage Device

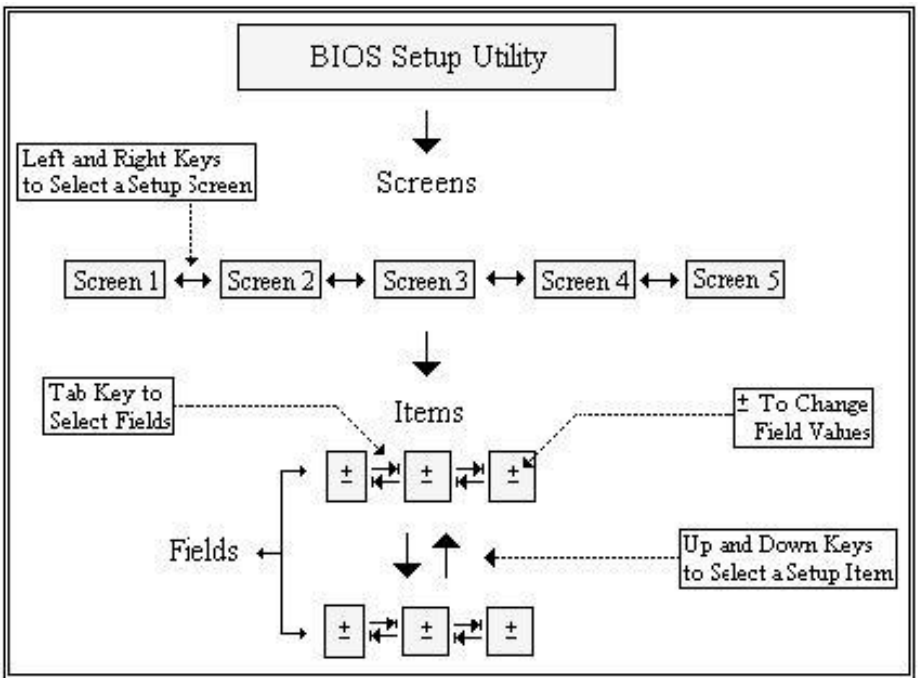
7. When message “Hit <DEL> if user want to run Setup” appear during POST, after turning on or rebooting the computer, press **<Tab>** key ***immediately*** to enter BIOS setup program.

This is the end of this section. If the terminal did not port correctly, please check the previous steps.

# Chapter 3 BIOS Setting

Power on the system, press the <Del> to run BIOS setup (remote mode is <Tab>). After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F10>, <Enter>, <ESC>, <Arrow> keys, and so on.




**Control Keys**

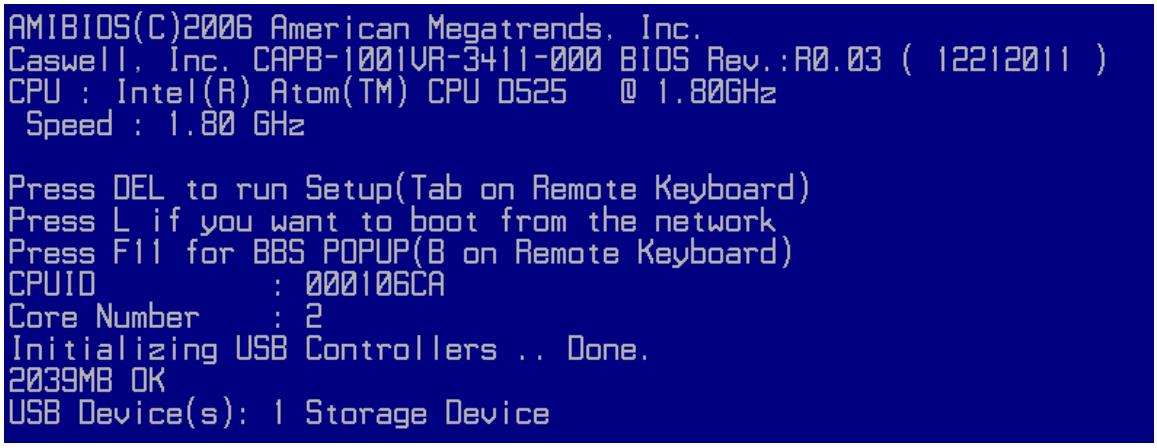
| Key | Function |
|---|---|
| **↑↓Up /Down** | The Up and Down <Arrow> keys allow you to select a setup item or sub-screen. |
| **→ ← Left/Right** | The Left and Right <Arrow> keys allow you to select a setup screen. For example: Main screen, Advanced screen, Chipset screen, and so on. |
| **+ - Plus/ Minus** | The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item. For example: Date and Time. |
| **Tab** | The <Tab> key allows you to select setup fields. |

| Hot Key | Description |
|---|---|
| F1 | The <F1> key allows you to display the *General Help screen*.<br><br>Press the <F1> key to open the *General Help screen*.<br><br>**General Help**<br><br>↔ Select Screen ↓↑ Select Item<br>+ - Change Screen Enter Go to Sub Screen<br>PGDN Next Page PGUP Previous Page<br>Home Go to Top of the Screen End Go to Bottom of Screen<br>F2/F3 Change Colors F7 Discard Changes<br>F8 Load Failsafe Defaults F9 Load Optimal Defaults<br>F10 Save and Exit ESC Exit<br><br>[Ok] |
| F10 | The <F10> key allows you to save any changes you have made and exit Setup. Press the <F10> key to save your changes. The following screen will appear:<br><br>Save configuration changes and exit now?<br><br>[Ok] [Cancel]<br><br>Press the <Enter> key to save the configuration and exit. You can also use the <Arrow> key to select *Cancel* and then press the <Enter> key to abort this function and return to the previous screen. |
| ESC | The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes. The following screen will appear:<br><br>Discard changes and exit setup now?<br><br>[Ok] [Cancel]<br><br>Press the <Enter> key to discard changes and exit. You can also use the <Arrow> key to select *Cancel* and then press the <Enter> key to abort this function and return to the previous screen. |
| Enter | The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub- screens. |

## *Main Menu*

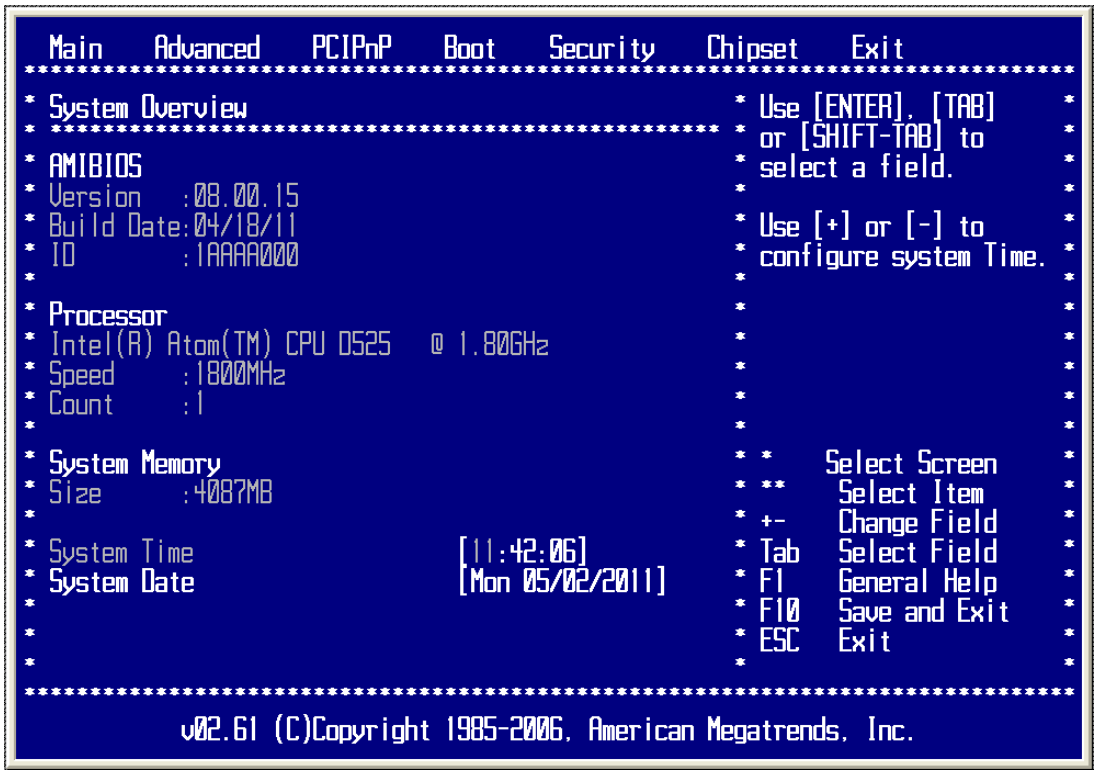
When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section.

In console mode:
Press “TAB” key can into BISO setup man menu
Press “B” key can popup device boot menu
Press “L” key can boot from network


AMIBIOS(C)2006 American Megatrends, Inc.
Caswell, Inc. CAPB-1001VR-3411-000 BIOS Rev.:R0.03 ( 12212011 )
CPU : Intel(R) Atom(TM) CPU D525 @ 1.80GHz
Speed : 1.80 GHz
Press DEL to run Setup(Tab on Remote Keyboard)
Press L if you want to boot from the network
Press F11 for BBS POPUP(B on Remote Keyboard)
CPUID : 000106CA
Core Number : 2
Initializing USB Controllers .. Done.
2039MB OK
USB Device(s): 1 Storage Device

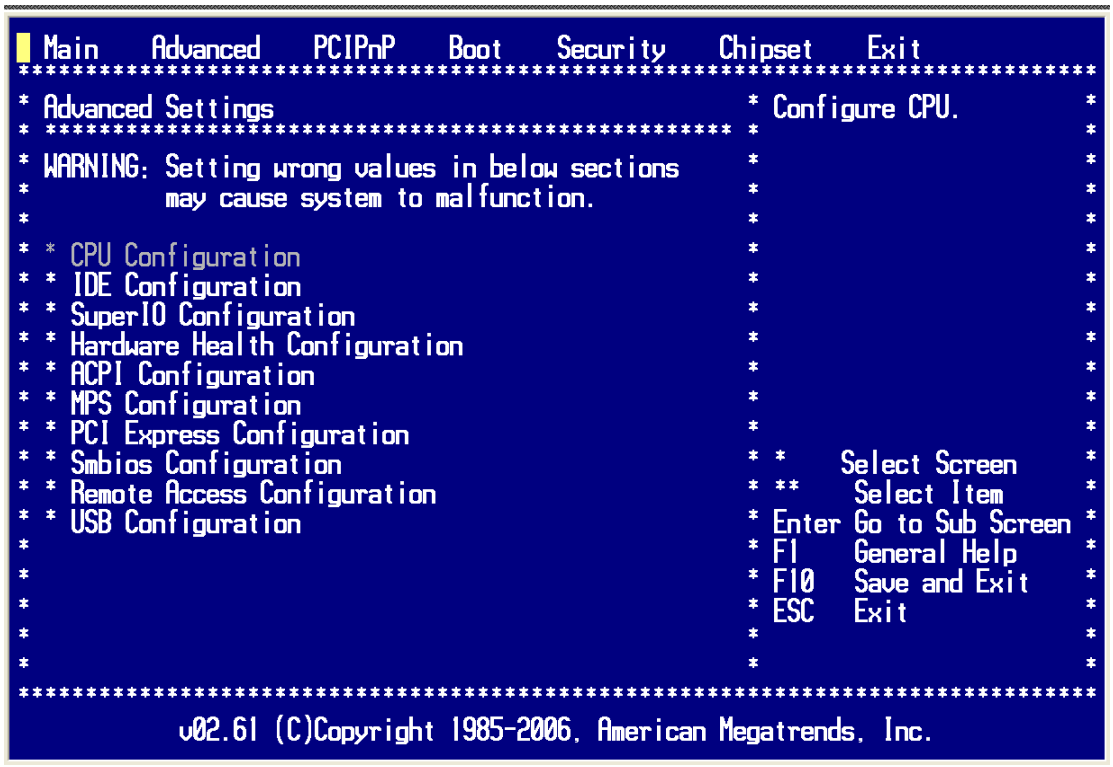
- **System Date / Time**

  Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.



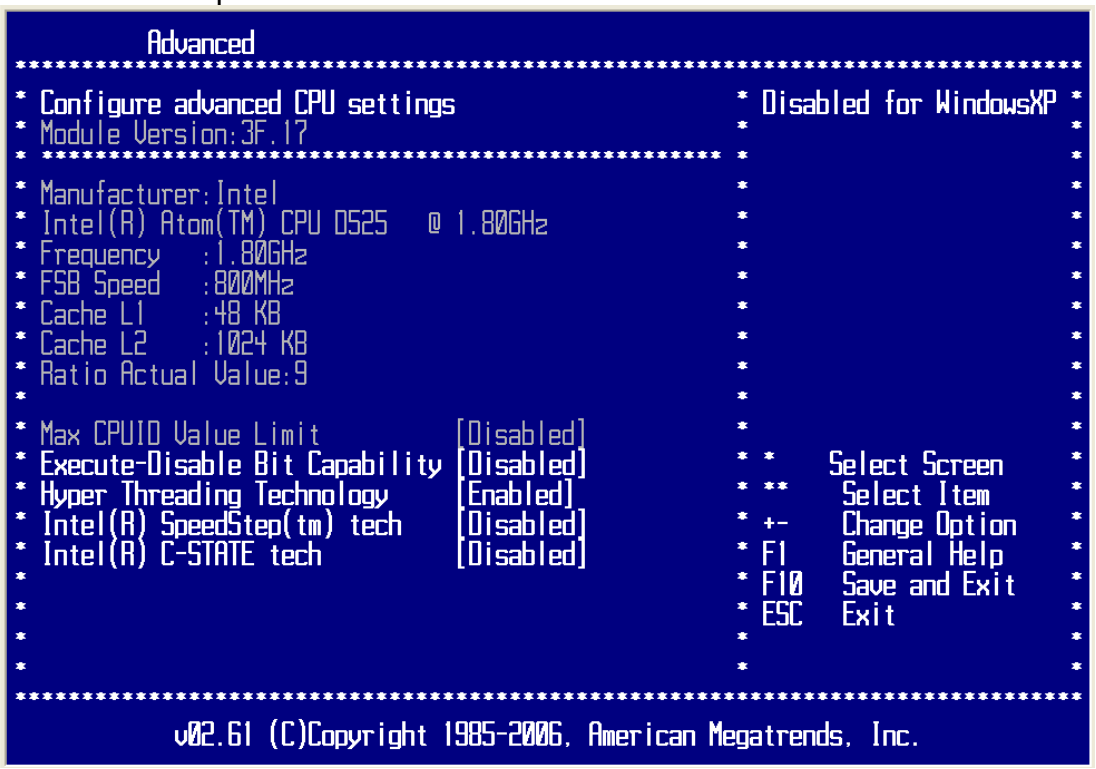
## ➢ Advanced BIOS Setup

Select the Advanced tab from the setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as SuperIO Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.




## ➢ CPU Configuration

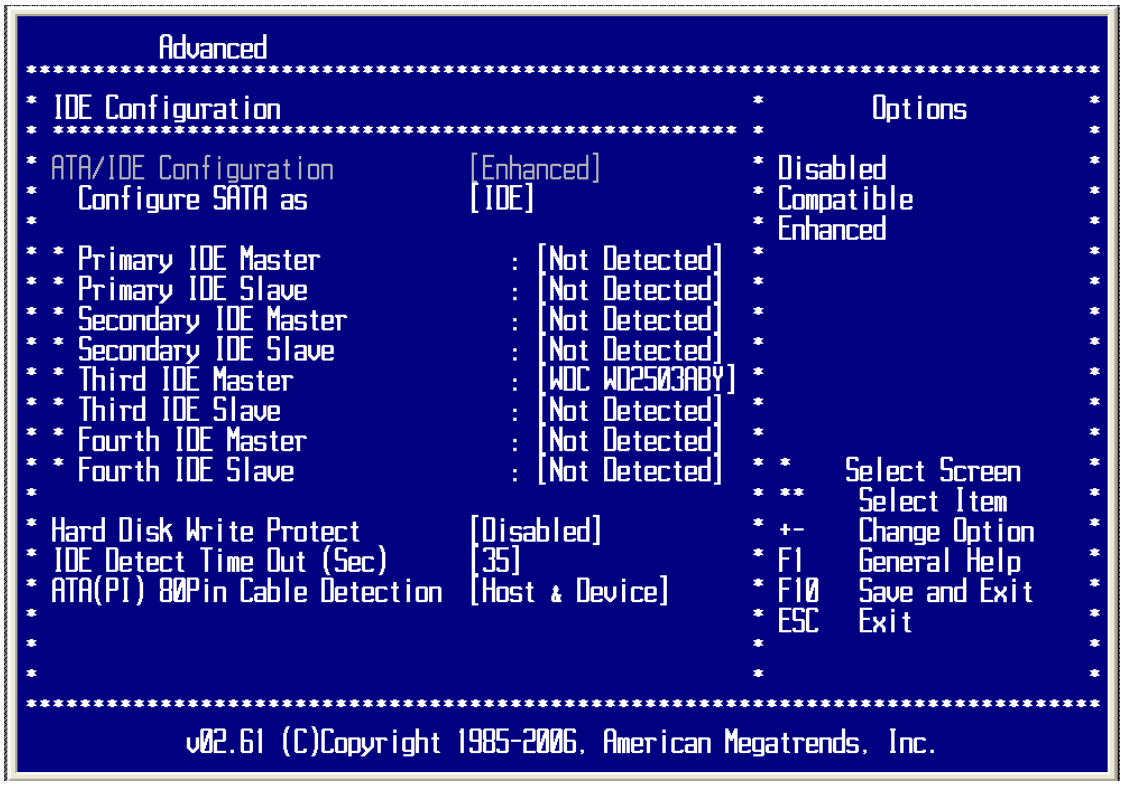
You can use this screen to select options for the CPU Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option.




**Note:** The CPU Configuration setup screen varies depending on the installed processor.

## ➢ IDE Configuration Setup

From the IDE Configuration screen, press <Enter> to access the sub menu. Use the up and down <Arrow> keys to select an item. The settings are described on the following pages.


Advanced
IDE Configuration
ATA/IDE Configuration [Enhanced]
Configure SATA as [IDE]
Primary IDE Master : [Not Detected]
Primary IDE Slave : [Not Detected]
Secondary IDE Master : [Not Detected]
Secondary IDE Slave : [Not Detected]
Third IDE Master : [WDC WD2503ABY]
Third IDE Slave : [Not Detected]
Fourth IDE Master : [Not Detected]
Fourth IDE Slave : [Not Detected]
Hard Disk Write Protect [Disabled]
IDE Detect Time Out (Sec) [35]
ATA(PI) 80Pin Cable Detection [Host & Device]
Options
Disabled
Compatible
Enhanced
* Select Screen
** Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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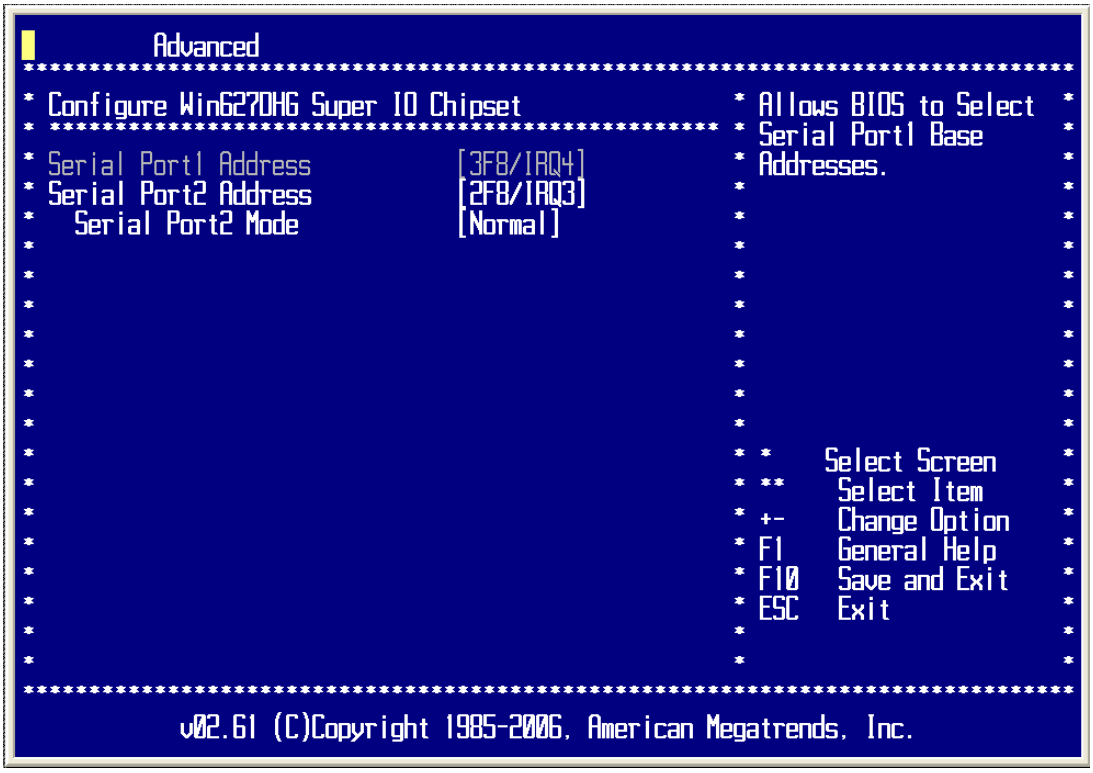
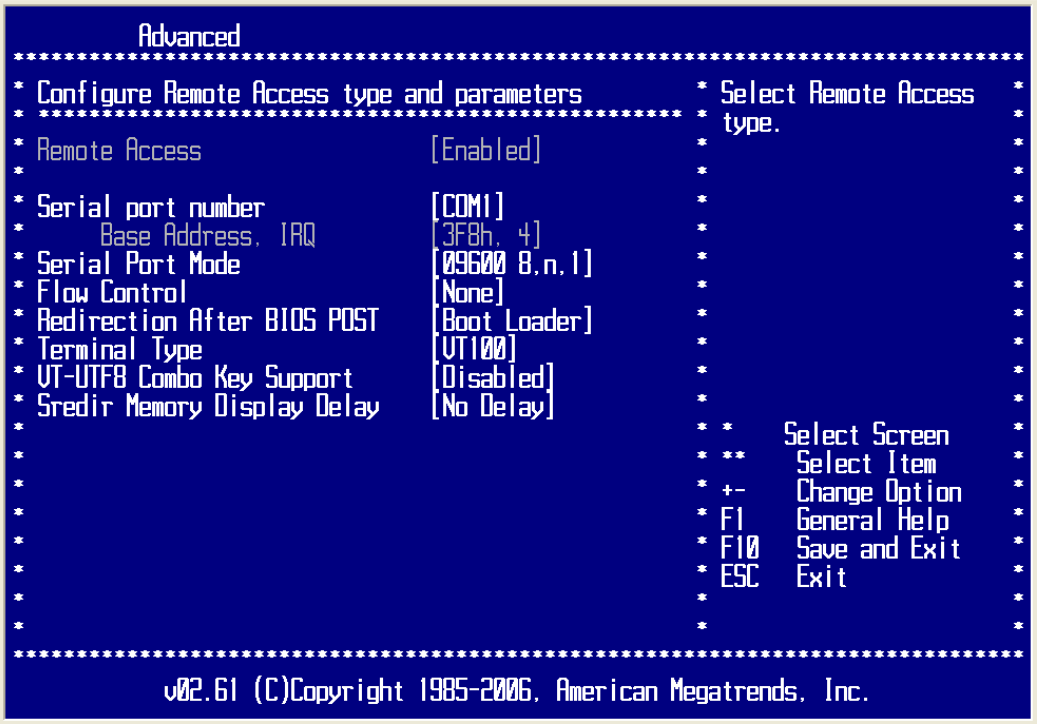
## ➢ SUPER IO CONFIGURATION

You can use this screen to select options for the Super I/O settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.



## ➢ REMOTE ACCESS CONFIGURATION

You can use this screen to select options for the Remote Access Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.




**Remote Access**

You can disable or enable the BIOS remote access feature here.

**Serial Port Number**

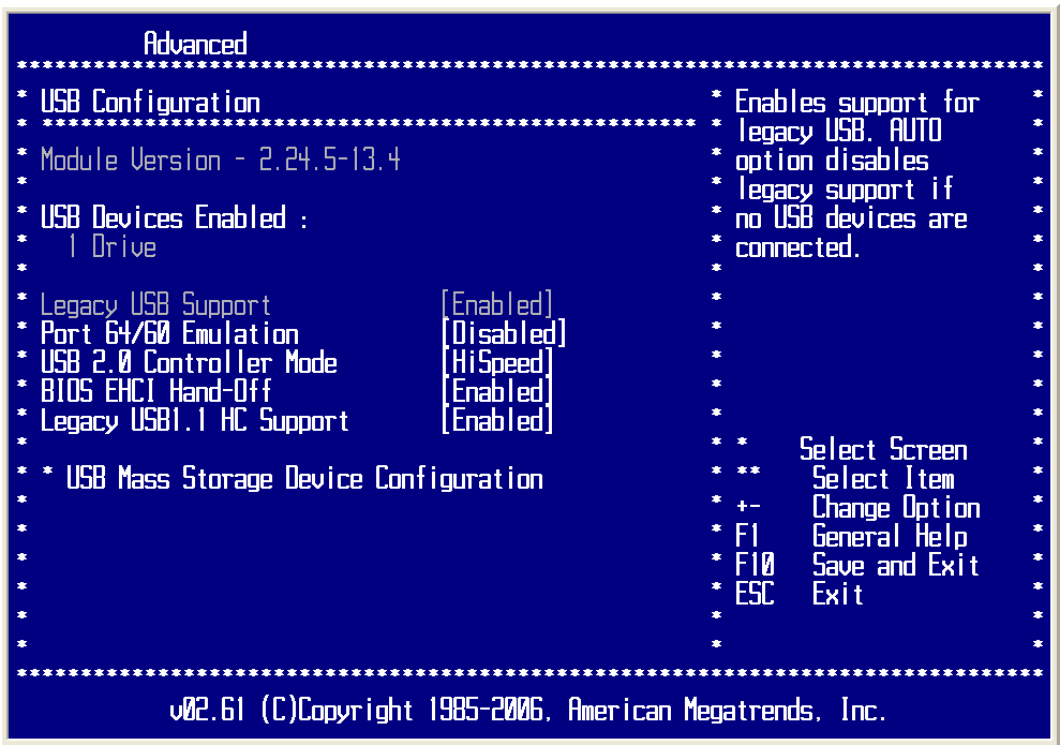
Select the serial port you want to use for console redirection. You can set the value for this option to either COM1 or COM2.

**Serial Port Mode**

Select the baud rate you want the serial port to use for console redirection.

## ➢ USB Configuration

You can use this screen to select options for the USB Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.


Advanced
USB Configuration
Module Version - 2.24.5-13.4
USB Devices Enabled :
1 Drive
Legacy USB Support [Enabled]
Port 64/60 Emulation [Disabled]
USB 2.0 Controller Mode [HiSpeed]
BIOS EHCI Hand-Off [Enabled]
Legacy USB1.1 HC Support [Enabled]
* USB Mass Storage Device Configuration
Enables support for legacy USB. AUTO option disables legacy support if no USB devices are connected.
Select Screen
Select Item
Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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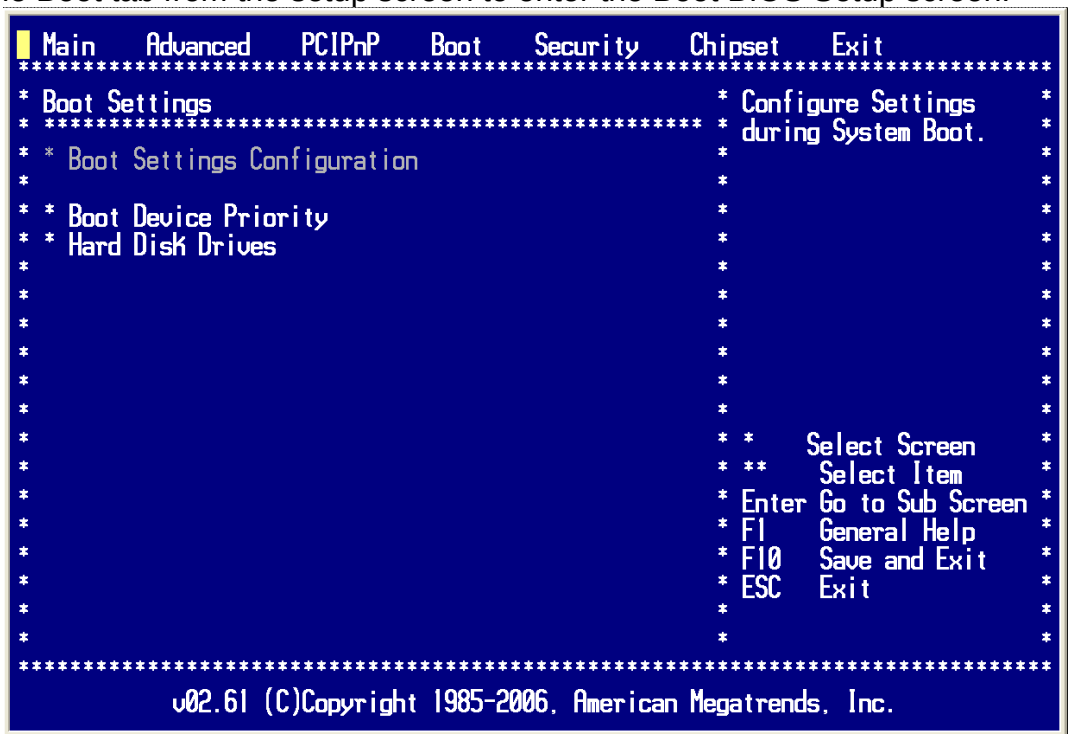
**Legacy USB Support**

Legacy USB Support refers to the USB mouse and USB keyboard support. Normally if this option is not enabled, any attached USB mouse or USB keyboard will not become available until a USB compatible operating system is fully booted with all USB drivers loaded. When this option is enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB drivers loaded on the system. Set this value to enable or disable the Legacy USB Support. The Optimal and Fail-Safe default setting is Disabled.

## ➢ Boot Settings

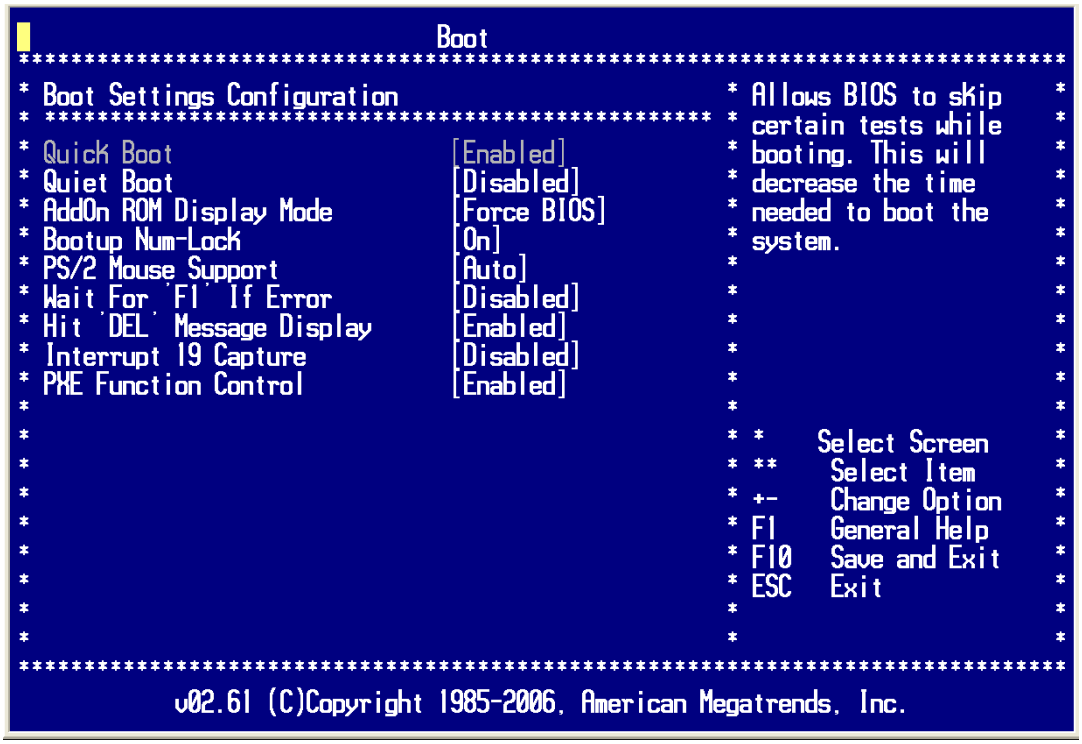
Select the Boot tab from the setup screen to enter the Boot BIOS Setup screen.



## ➢ BOOT SETTINGS CONFIGURATION SCREEN

**Boot Settings Configuration**

Use this screen to select options for the Boot Settings Configuration. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below.


Boot
Boot Settings Configuration
Quick Boot [Enabled]
Quiet Boot [Disabled]
AddOn ROM Display Mode [Force BIOS]
Bootup Num-Lock [On]
PS/2 Mouse Support [Auto]
Wait For 'F1' If Error [Disabled]
Hit 'DEL' Message Display [Enabled]
Interrupt 19 Capture [Disabled]
PXE Function Control [Enabled]
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
Select Screen
Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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**Quick Boot**

The Optimal and Fail-Safe default setting is Enabled.

**Quiet Boot**

Set this value to allow the boot up screen options to be modified between POST messages or OEM logo. The Optimal and Fail-Safe default setting is *Disabled*

**Add-On ROM Display Mode**

Set this option to display add-on ROM (read-only memory) messages. The Optimal and Fail-Safe default setting is *Force BIOS*. An example of this is a SCSI BIOS or VGA BIOS.

**Boot up Num-Lock**

Set this value to allow the Number Lock setting to be modified during boot up. The Optimal and Fail-Safe default setting is *On.*

**PS/2 Mouse Support**

Set this value to allow the PS/2 mouse support to be adjusted. The Optimal and Fail-Safe default setting is Auto

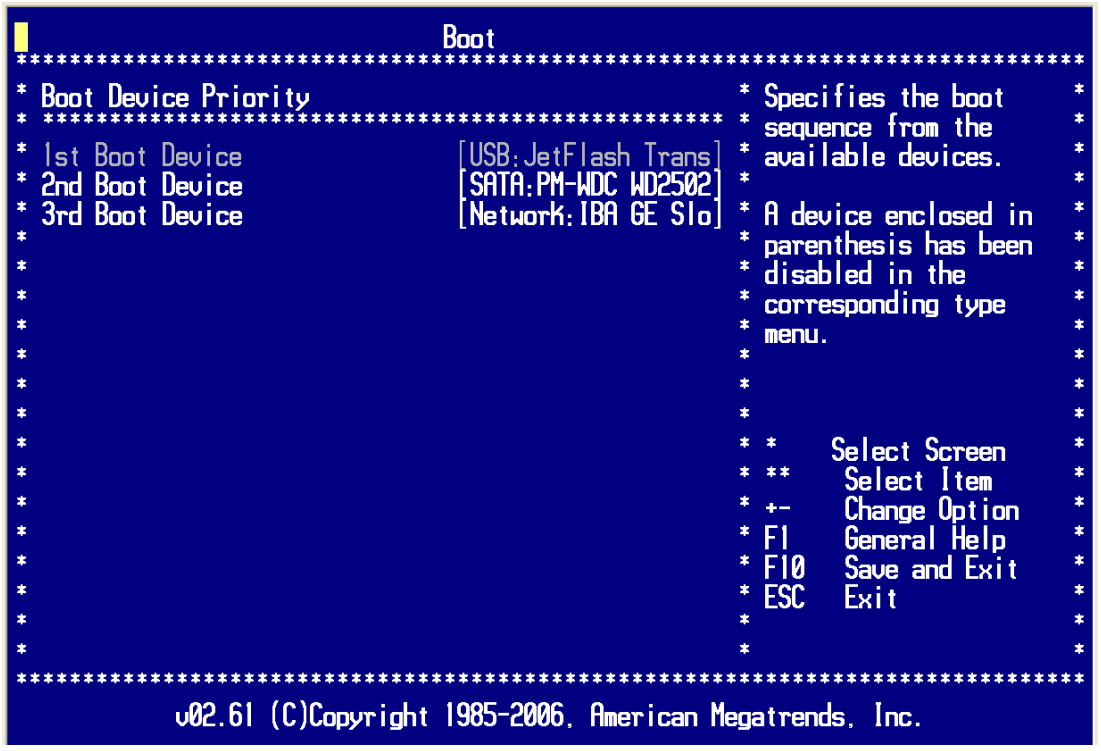
**Interrupt 19 Capture**

Set this value to allow option ROMs such as network controllers to trap BIOS interrupt 19.

## ➢ BOOT DEVICE PRIORITY

**Boot Device Priority**

Use this screen to specify the order in which the system checks for the device to boot from. To access this screen, select Boot Device Priority on the Boot Setup screen and press <Enter>. The following screen displays:


Boot
Boot Device Priority
1st Boot Device [USB:JetFlash Trans]
2nd Boot Device [SATA:PM-WDC WD2502]
3rd Boot Device [Network:IBA GE Slo]
Specifies the boot sequence from the available devices.
A device enclosed in parenthesis has been disabled in the corresponding type menu.
Select Screen
Select Item
Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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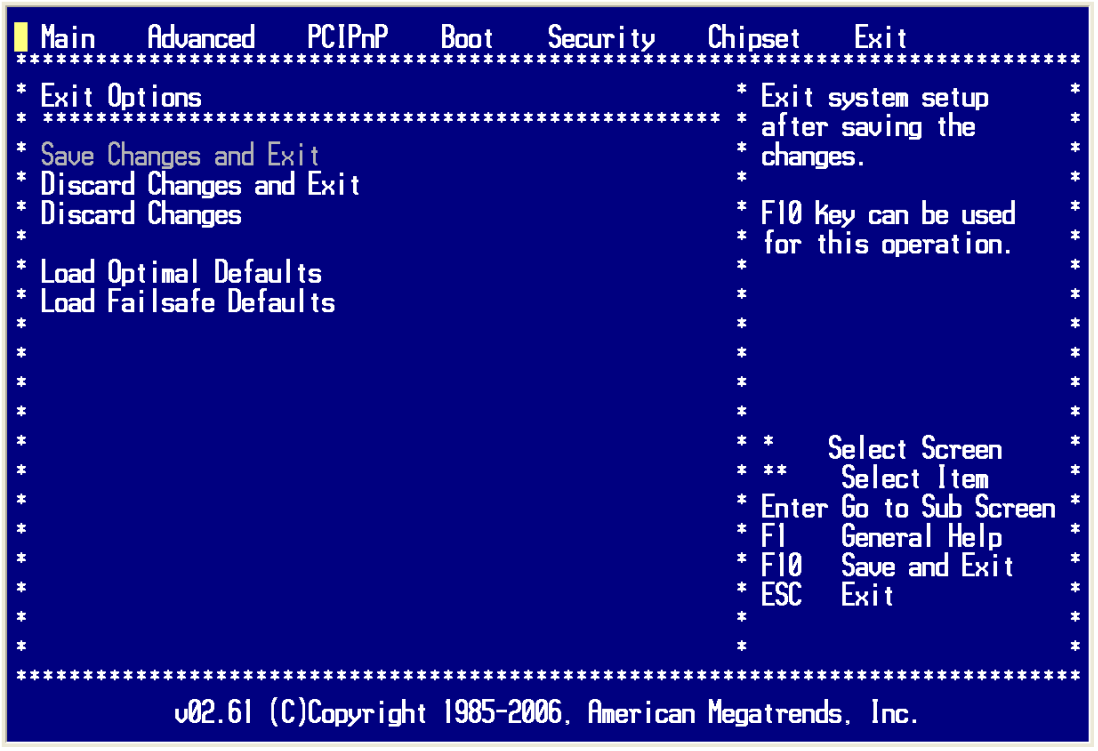
## ➢ Exit Menu

Select the Exit tab from the setup screen to enter the Exit BIOS Setup screen. You can display an Exit BIOS Setup option by highlighting it using the <Arrow> keys. All Exit BIOS Setup options are described in this section. The Exit BIOS Setup screen is shown below.


Main Advanced PCIPnP Boot Security Chipset Exit
Exit Options
Save Changes and Exit
Discard Changes and Exit
Discard Changes
Load Optimal Defaults
Load Failsafe Defaults
Exit system setup after saving the changes.
F10 Key can be used for this operation.
Select Screen
Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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**Saving Changes and Exit**
When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Exit Saving Changes from the Exit menu and press <Enter>.

**Discarding Changes and Exit**
Select this option to quit Setup without making any permanent changes to the system configuration. Select Exit Discarding Changes from the Exit menu and press <Enter>.

**Discard Changes**
Select Discard Changes from the Exit menu and press <Enter>.

**Load Optimal Defaults**
Automatically sets all Setup options to a complete set of default settings when you select this option. Select Load Optimal Defaults from the Exit menu and press <Enter>.

**Load Fail-Safe Defaults**
Automatically sets all Setup options to a complete set of default settings when you select this option. The Fail-Safe settings are designed for maximum system stability, but not maximum performance. Select the Fail-Safe Setup options if your computer is experiencing system configuration problems.
Select Load Fail-Safe Defaults from the Exit menu and press <Enter>.